

A NEW FISH OF THE GENUS *ACANTOPSIS* VAN HASSELT (CYPRINIFORMES: COBITIDAE) FROM MANIPUR, INDIA¹

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A new fish species, *Acantopsis multistigmatus* is described from the Lokchao river, a tributary of the Yu river in Manipur. It is distinct from *A. thiemmedhi* Sontirat by its greater number of vertebrae (43 vs. 39-41); greater number of dark brown blotches on the sides (14-17 vs. 8-9); regular, round and smaller blotches vs. irregular and larger blotches on sides; greater number of saddles (17 vs. 8-9); dorsal fin with 3 dark bands vs. 1 band near the rim and another dark spot on the middle of 1-3 dorsal rays; caudal fin with three transverse bands vs. 1 large oblong dark bar on each caudal lobe; pectoral, pelvic and anal fins with dark spots vs. only dorsal and caudal fins banded. It is distinct from *A. choirorhynchos* (Bleeker) by its smaller number of gill-rakers (18 vs. 21-27); characteristic colour pattern of dorsal and caudal fins mentioned above vs. absent on dorsal and caudal fins (except occasionally in smaller specimens); smaller head length 22.1 (21.3-22.5) vs. 25.6 (24.4-27.4) and smaller pre-pectoral length (18.8-20.2) vs. 23.5 (21.9-25.2) all in % of SL.

Key words: New fish species, *Acantopsis*, Manipur

INTRODUCTION

The hill-stream loaches of the genus *Acantopsis* van Hasselt are highly elongate, cylindrical and colourful fish that are found underneath sand and in between gravel and coarse sand (Sontirat 1999). *Acantopsis choirorhynchos* (Bleeker) was described by Bleeker (1854) as *Cobitis choirorhynchos* from Sumatra. Chen (1981) placed *Acantopsis lachnostoma* Rutter, as a junior synonym of *A. choirorhynchos*, extending its range as far as southern China. However, Roberts (1989) recognized the validity of *A. lachnostoma* and its endemic distribution in southern China, based on its differences with *A. choirorhynchos*, on comparing the holotype of *A. lachnostoma* with two typical specimens of *choirorhynchos* from Kapuas, Western Borneo. He also remarked on the poorly known systematics of the genus, which made it difficult for him to comment on its distribution. While describing *A. thiemmedhi* from Thailand, Sontirat (1999) mentioned that the genus *Acantopsis* was till then known from Thailand as *A. choirorhynchos* alone. Thus, the geographical distribution of the species is concentrated around the far-east Asian region. It is in no way connected with the Chindwin River system. Talwar and Jhingran (1991) reported the occurrence of the species from Assam, India and Myanmar, while Menon (1992) stated that it was distributed in the Indo-Australian Archipelago and South-eastern Asia. He made a description of the species based on six specimens from Irrawady river at Mandalay and Chindwin drainage at Kunghein, collected during the Vernay-Hopwood Upper Chindwin Expedition in 1935. Rainboth (1996) noted that *A. choirorhynchos* and *A. dialuzona* from

Cambodian Mekong are misidentifications. Jayaram (1999), while reporting distribution of the genus in Southeast Asia noted that the only species from the Indian region was *A. choirorhynchos* from Assam. In view of very little data available on the genus and contradictory statements of workers, a detailed study on the taxonomy and distribution of *Acantopsis* is essential.

This paper describes a new species of the genus *Acantopsis* van Hasselt from the Lokchao river, Manipur, a tributary of the Yu river.

MATERIAL AND METHODS

Fish were collected from Moreh market and immediately preserved in 10% formaline solution. Measurements and counts followed Jayaram (1999) and are expressed as percentages of standard length (SL) and head length (HL). Measurements were made with dial callipers (Mitutoyo, Japan) to the nearest 0.1 mm. The type specimens are deposited in the Manipur University Museum of Fishes (MUMF). Counting of vertebrae was done by Alizarin Red S staining technique for bones as described by Hollister (1934).

Holotype: MUMF 3044, 205.4 mm SL, Lokchao river, Manipur. 24.iii.1999, W. Vishwanath Singh and party.

Paratypes: MUMF 3045/5, 152.9-203.6 mm SL, same data as holotype. MUMF 3047/1, 121.8 mm SL, Lokchao river, Manipur. 18.v.2001. Juliana Laisram. MUMF 3048/1, 142.3 mm SL, Lokchao river, Manipur. 23.v.2000. JL.

Local name: Ching ngakrijrou (Manipuri)

Diagnosis: A hill-stream loach with a very elongate and cylindrical body, 14-17 lateral blotches arranged longitudinally

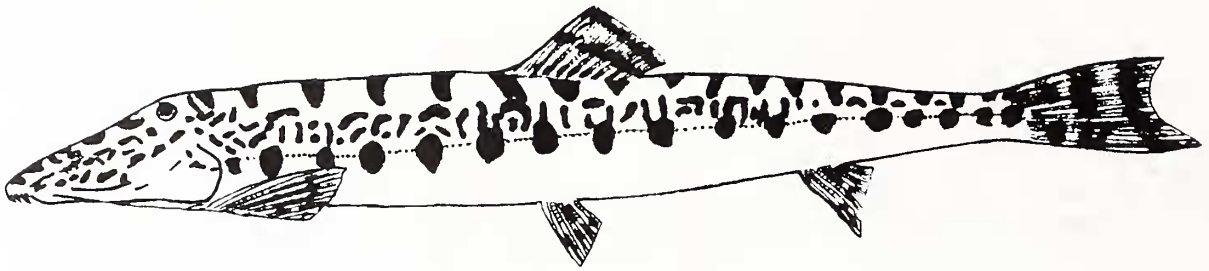


Fig. 1: Lateral view of *Acantopsis multistigmatus* sp. nov.

on the flanks and 17 dark brown saddles across the back, a pattern of many small, transverse and horizontal wavy bars and spots arranged longitudinally between the saddles and the blotches. Three rows of dark brown spots on dorsal fin and two on pelvic fin. No black spot at the upper base of caudal fin. Pectoral, pelvic and anal fins spotted with black. Caudal fin slightly emarginated. Gill-rakers 18 (4+14).

Description: D. iii, 9½; P. i, 9-10; V. i, 6; A. iii, 5; C. 7+7.

Body very elongate and compressed, its depth 10.9 (9.7-12.0), head long, 21.9 (21.3-22.4), longer than caudal length which is 15.9 (13.8-17.4) all in % SL. Snout much elongated, 68.3 (65.4-70.6)% HL and pointed. Eyes small, subcutaneous, situated dorsally very close to the occiput, its diameter longer than inter-orbital width. An erectile bifid spine present between the nostrils and orbit, nearer to the nostrils, level with the lower margin of the orbit. Mouth small, inferior. Barbels four pairs, two rostral and two maxillary, all small. Lips thick, both fringed, mental lobes well developed into two fringed prolongations. Gill openings small, extending only a little above origin of pectorals.

Caudal peduncle long, its least depth 2.6 (2.4-2.8) in its length. Scales minute, absent on head. Lateral line complete. Dorsal fin origin midway between tip of snout and caudal fin base, slightly in advance of ventral fin origin. Anal fin short, caudal fin slightly emarginate, the lower lobe longer. Ventral fin nearer caudal fin base than tip of snout (Fig. 1).

Colour: Creamy yellow with 14-17 lateral blotches arranged longitudinally on flanks and 17 saddles across back; pattern of many small, transverse and horizontal wavy bars and spots arranged longitudinally between the saddles and the blotches, all in dark brown tints. Three rows of dark brown spots on dorsal fin, two on pelvic fin. Pectoral, pelvic and anal fins spotted with black. The pattern on the body is also found on the head.

Distribution: INDIA: Lokchao river, Manipur, Assam. Myanmar.

Etymology: The species is named after the large number of deep dark brown blotches on the sides.

Remarks: *Acantopsis multistigmatus* sp. nov. is distinguished from *A. choirorhynchos* in having fewer gill-

Table 1: Morphometry and distribution of *A. multistigmatus* sp. nov., *A. thiemmedhi* and *A. choirorhynchos*

Characters	<i>Acantopsis multistigmatus</i> sp. nov	<i>A. thiemmedhi</i> Sontirat	<i>A. choirorhynchos</i> Sontirat 1999
Gill-rakers	18	16-18	21-27
Colour	14-17 blotches, 17 saddles on dorsal part of body. 3 rows of black spots on dorsal and 2 rows on caudal fins. Pectoral, pelvic and anal fins spotted with rows of dark spots.	8-9 irregular blotches, 8-9 saddles on dorsal part of body. 1 row and a blotch at 1 st three dorsal rays. 1 large oblong dark bar near the middle part of each caudal lobe. Only dorsal and caudal fins banded, other fins hyaline.	No markings on caudal and dorsal fins. However, small dark lateral spots and blotches on sides and back and three rows of small dark spots on dorsal may or may not be present in small specimens.
Vertebrae	43	39-41	40-44
Caudal fin	Slightly emarginate	Bilobed	—
Max. SL	181 mm	132 mm	—
Distribution	Lokchao river, Manipur, India	Thailand	India: Assam, Borneo, Java, Malaya, Myanmar, Sumatra, Thailand, Vietnam. (Jayaram 1999)

NEW DESCRIPTIONS

Table 2: Morphometric comparison of *A. multistigmatus* sp. nov. with *A. thiemmedhi* and *A. choirorhynchus*

	<i>A. multistigmatus</i> sp. nov.		<i>A. thiemmedhi</i> Sontirat (1999)	<i>A. choirorhynchus</i> Sontirat (1999)
	Holotype MUMF 3044	Paratype (N=7) MUMF 3045/5, 3047/1, 3048/1 Mean (Range)	Mean (Range)	Mean (Range)
Standard Length	181.0	103.2-181.0	-	-
Body Depth	9.9	10.6(9.7-12.0)	13.5(12.3-15.2)	11.8(9.8-13.0)
Caudal Length	16.2	15.1(13.8-17.4)	-	-
Head Length	22.0	22.1(21.3-22.3)	24.9(23.4-26.1)	25.6(24.4-27.4)
Height of head (occiput)	8.7	9.4(8.7-10.4)	-	-
Height of head (eye)	8.6	8.9(8.3-9.8)	-	-
Snout Length	15.5	15.0(14.3-15.5)	-	-
Eye Diameter	2.2	2.4(2.2-2.6)	-	-
Inter-orbital space	1.3	1.8(1.3-2.0)	-	-
Inter-narial space	-	1.5(0.8-1.6)	-	-
Gape width	1.8	2.2(1.7-2.4)	-	-
Length of caudal peduncle	12.3	12.2(11.6-12.3)	-	-
Height of caudal peduncle	4.5	4.7(4.5-5.0)	-	-
Pre-dorsal length	48.9	48.9(47.8-50.0)	-	-
Post-dorsal length	50.1	49.9(49.6-50.1)	-	-
Pre-pectoral length	18.8	19.5(18.8-20.2)	22.4(20.4-27.8)	23.5(21.9-25.2)
Pre-pelvic length	50.4	53.7(50.4-55.0)	56.3(54.1-58.5)	57.8(54.5-59.2)
Pre-anal length	75.9	79.7(75.9-81.3)	79.9(78.8-83.4)	81.2(72.2-86.6)
Pre-anus length	71.6	78.4(71.6-103.6)	-	-
Max. head-width	6.5	7.4(5.7-8.1)	-	-
Head width (nares)	3.7	4.4(3.6-4.9)	-	-
Body width at dorsal origin	8.6	9.4(7.5-10.1)	-	-
Body width at anal origin	5.1	6.3(5.1-6.8)	-	-
Dorsal fin base length	11.0	12.4(11.0-13.0)	14.3(14.2-15.4)	14.4(12.7-16.1)
Dorsal fin height	11.2	12.5(11.2-13.0)	-	-
Anal fin base length	7.4	7.8(7.1-8.7)	7.9(5.5-10.5)	8.1(6.0-9.6)
Pectoral fin length	13.7	14.1(13.6-15.5)	16.7(14.3-20.5)	13.5(10.8-15.6)
Pelvic fin length	10.2	11.0(10.2-11.3)	9.5(8.5-14.5)	9.3(7.6-11.1)

rakers [18 vs. 21-27], shorter head length [22.0 (21.3-22.4) vs. 25.6 (24.4-27.4)% SL], shorter pre-pectoral length [19.5 (18.8-20.2) vs. 23.5 (21.9-25.2)% SL]. Sontirat (1999) examined as many as 180 specimens of *A. choirorhynchus* and found no dark blotches or spots on caudal and dorsal fins in larger specimens. However, the smaller specimens had small dark lateral spots and/or blotches on the sides and back, and some of these had three rows of small dark spots on the dorsal fin. The new species is also distinct from *A. choirorhynchus*, as described by Roberts (1989) by its longer head [head length 4.5-4.7 vs. 3.8 %SL], shallower caudal peduncle [caudal peduncle depth 19.9-22.4 vs. 22.3-23.0 %SL], greater numbers of vertebrae [43 vs. 42] and fewer dorsal fin rays [iii, 9½ vs. iii, 10½]. The new species also differs from *A. choirorhynchus*, as described by Day (1878) in its shallower body [body depth 9.3 (8.5-10.4) vs. 11.1 %TL], shorter head [19.2 (18.9-19.6) vs. 20.0 % TL] and caudal fin [caudal length 13.3 (12.1-14.7) vs. 16.7 %TL]; in having more blotches on sides of body [14-17 vs. 12], more saddles across the back [17 vs. 12], and more rows of blotches along dorsal fin [3 vs. 2]. The new species

Table 3: Comparison of *Acantopsis multistigmatus* sp. nov. with *A. choirorhynchus* Day (1878)

Characters	<i>A. multistigmatus</i> sp. nov.	<i>A. choirorhynchus</i> Day
Body depth (% of TL)	9.3(8.5-10.4)	11.1
Caudal length (% of TL)	13.3(12.1-14.7)	16.7
Head length (% of TL)	19.2(18.9-19.6)	20.0
Number of blotches at sides	14-17	12
Number of bands across back	17	12
Number of bands along dorsal	3	2
Number of bands across anal	Few irregular spots	3 rows of blotches
Fin counts	D. iii, 9½; P. i, 9-10; V. i, 6; A. iii, 5½; C. 7+7	D. iii, 9; P. 11; V. 7; A. iii, 5; C. 11

has a few irregularly arranged spots across the anal fin, in contrast with the three rows of blotches in *A. choirorhynchos*. (The comparison is given in Table 3).

A. multistigmatus sp. nov. can be distinguished from *A. thiemmedhi* Sontirat by the colour pattern, 14-17 blotches vs. 8-9 irregular blotches on the lateral line, 17 vs. 8-9 saddles on the dorsal part of the body; a pattern of many small, transverse and horizontal wavy bars and spots arranged longitudinally up to the caudal peduncle region between the saddles and the blotches vs. only a row of broken horizontal wavy bars up to the posterior region of dorsal fin; 3 rows of black spots each on dorsal and caudal fins vs. 1 row and a blotch at first three dorsal rays and one large oblong dark bar near the middle part of each caudal lobe; body depth 10.9 (9.7-12.0) vs. 13.5 (12.3-15.2), pre-pectoral length 19.5 (18.8-20.2) vs. 22.4 (20.4-27.8), dorsal base length 12.3 (11.0-13.0) vs. 14.3 (14.2-15.4) all in % of SL, head depth 42.9 (39.7-46.3) vs. 58 (53.0-59.5), eye diameter 10.7 (10.1-11.7) vs. 14.9 (13.7-16.6) and snout length 68.0 (65.4-70.6) vs. 62.4 (57.9-64.1) all in % of head length. The new species also differs from *A. thiemmedhi* in its slightly emarginate caudal fin, as compared to bilobed one of the latter, larger size (103.2-181.0 mm vs. 46.7-122.8 mm) SL. (Comparisons are given in Tables 1 and 2). The percentage measurement of head depth, eye diameter and snout length provided by Sontirat (1999) is in percentage of head length and not in percentage of standard length as is printed.

A. multistigmatus is also distinct from *A. lachnostoma* Rutter in its caudal peduncle depth 4.7 (4.5-5.0) vs. 7.6 % SL, dorsal fin rays iii, 9½ vs. iii, 7½ and number of vertebrae 43 vs. 44.

Talwar and Jhingran (1991), Menon (1992) and Jayaram (1999) reported *A. choirorhynchos* to be widely distributed in the South-eastern Asian region. However, its distribution outside Borneo, Sumatra and Thailand region needs confirmation, as the description of the species from Thailand given by Sontirat (1999) does not fit into the description given by them. Three species of this genus from the Mekong have been reported as misidentified by Rainboth (1996) and are being kept as sp. 1, sp. 2 and sp. 3. The identity of *A. choirorhynchos* requires confirmation in view of the comment by Roberts (1989) that due to the paucity of systematic knowledge of this genus, statements on species distributions are not meaningful. As the drainage in which the hitherto known *A. choirorhynchos* of the Indian region is totally different from the type locality of the species, careful examination of the specimens is required for their correct identification.

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